ABSTRACT

A signal under measurement x(t) is transformed into a complex analytic signal $z_c(t)$, and an instantaneous phase of the $x_c(t)$ is estimated using the $z_c(t)$. A linear phase is removed from the instantaneous phase to obtain a phase noise waveform $\Delta\phi(t)$ of the x(t), and the $\Delta\phi(t)$ is sampled at a timing close to a zero-crossing timing of the x(t) to obtain a timing jitter sequence. Then a difference sequence of the timing jitter sequence is calculated to obtain a period jitter sequence. The period jitter sequence is multiplied by a ratio $T_0/T_{k,k+1}$ of the fundamental period T_0 of the x(t) and the sampling time interval $T_{k,k+1}$ to make a correction of the period jitter sequence. A period jitter value of the x(t) is obtained from the corrected period jitter sequence.